

REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for the courtesies extended in the telephonic Examiner interview of October 27, 2005, and for carefully considering this application.

Disposition of Claims

Claims 1-8 are pending in the present application. Claim 1 is independent. The remaining claims depend, directly or indirectly, from claim 1.

Rejection(s) under 35 U.S.C. § 102

Claims 1-5 and 8 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,537,648 issued to Takahashi *et al.* (hereinafter “Takahashi”). For the reasons set forth below, this rejection is respectfully traversed.

The present invention is directed to a molded glass substrate for a magnetic disk. As shown in Figure 1 of the application, a molded glass substrate **11** in accordance with one or more embodiments of the invention comprises principal surfaces **12**, a molding-free face **13**, and an inner surface **14**. The molding-free face **13** joins principal surfaces **12**, which are formed by press molding (*see, e.g.*, Publication of the Specification, paragraph [0042]). This results in the transcription of the surfaces of a molding die onto principal surfaces **12**. The molding-free face **13**, however, is not controlled by a processed surface of a die during molding (*see, e.g.*, Publication of the Specification, paragraph [0043]). This results in a mirror-finished surface that requires no surface finishing, and is physically distinguishable from a molded surface or a ground surface (*see, e.g.*, Publication of the Specification, paragraphs [0021], [0044]).

Accordingly, independent claim 1 requires an outer surface joining the upper and lower principal surfaces, where the outer surface is a molding-free face.

Takahashi does not disclose an outer surface that is a molding-free face as required by the claimed invention. In clear contrast to the claimed invention, Takahashi discloses obtaining a disk-shaped glass substrate through the use of multiple dies or from cutting. Further, Takahashi clearly states: "...an outer peripheral end face was ground to reduce the diameter to 65 mm ϕ ." Thus, it would be clear to one skilled in the art that Takahashi does not disclose an outer surface that is a molding-free face as required by the claimed invention.

As evidenced by the attached declaration, one important feature of the claimed invention is that the outer surface of the molded glass substrate is a molding-free face, which is a distinct structural limitation. In other words, the outer surface of the molded glass substrate is cooled and set without being controlled by a die or a similar device. The resulting characteristics of surface of the molding-free face include a lack of grinding or chamfering marks and smoothness due to not being formed with a mold.

As further evidenced in the attached declaration, when analyzed using an optical stereoscopic microscope, a roughness measuring device, or a similar device, a molding-free face is structurally distinguishable from a molded glass substrate that is formed with a mold or a die, and from a molded glass substrate that has a ground or chamfered surface.

Attached comparative examples further distinguish a molded glass surface from a molding-free face. As discussed in the Examiner interview of October 27, 2005, the Examples in the Reply dated April 7, 2005, were not distinguishable from each other due to the figures being scanned. Applicant attaches herewith multiple examples of the previous figures, in varying degrees of brightness, for the Examiner's reference. As seen in Figures (a) and (c) of the comparative examples, a molded glass substrate that was chamfered according to prior art

exhibits a roughened surface when magnified. This roughened surface may contain cracked layers of glass that may result in lower reliability of the outer surface due to the intrusion of moisture. In clear contrast and as seen in Figures (b) and (d) of the comparative examples, the surface of a molding-free face in accordance with an embodiment of the claimed invention exhibits a smooth surface when magnified. Figure (e) of the comparative examples shows that the outer surface of a molded glass substrate that is chamfered is distinguishable from the smooth, rounded edge of the outer surface of a molding-free face, which is shown in Figure (f) of the comparative examples.

In view of the above, Takahashi fails to show or suggest the present invention as recited in independent claim 1. Thus, independent claim 1 is patentable over Takahashi. Claims 2-5 and 8, directly dependent from claim 1, are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection(s) under 35 U.S.C. § 103

Claims 6 and 7 are rejected under 35 U.S.C. § 103(a) as being obvious over Takahashi in view of U.S. Patent No. 3,660,061 issued to Donley *et al.* (hereinafter “Donley”). For the reasons set forth below, this rejection is respectfully traversed.

As discussed above, Takahashi fails to show or suggest all the limitations of independent claim 1. Donley does not show or suggest all the limitations of independent claim 1. Further, Donley fails to show or suggest that which Takahashi lacks. This is evidenced by the fact that Donley is relied on only in an attempt to render obvious limitations relating to grinding and polishing a surface and fire polishing a surface (*see* Office Action of June 30, 2005, pages 4-5). In contrast to the claimed invention, Donley is directed to producing a coated sheet

of glass to provide desired properties to the glass (*see* Donley, Abstract). Donley is completely silent with respect to a molding-free face, as required by independent claim 1 of the invention.

In fact, as Donley is directed to coating sheets of plate glass (*see* Donley, col. 8, lines 27-30) and not to molded glass substrates, it would be clear that without the present application as a guide, one skilled in the art would not look to Donley to address issues related to molded glass substrates. The present application *cannot be used as a guide* in reconstructing elements of prior art references to render the claimed invention obvious. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991) (emphasis added). Thus, Donley is not properly combinable with Takahashi.

In view of the above, Takahashi and Donley, (i) whether taken separately or in combination, fail to show or suggest the present invention as recited in independent claim 1, and (ii) are not properly combinable. Thus, claims 6 and 7, directly dependent from claim 1, are patentable over Takahashi and Donley. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 04558/053001).

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Respectfully submitted,

By 

Thomas K. Scherer
Registration No.: 45,079
OSHA · LIANG LLP
1221 McKinney St., Suite 2800
Houston, Texas 77010
(713) 228-8600
(713) 228-8778 (Fax)
Attorney for Applicant

Attachments (Declaration; color copies of comparative examples of surfaces, black and white copies of comparative examples of surfaces)

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